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310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 73.00: AMALGAM WASTEWATER AND RECYCLING REGULATIONS FOR DENTAL FACILITIES

Section

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73.01: Purpose and Authority

(1) The purpose of 310 CMR 73.00 is to protect public health, safety, welfare and the environment. These regulations establish wastewater treatment, operational standards, and amalgam recycling requirements to reduce the amount of mercury discharged from dental facilities, and require a performance-based compliance certification from the owners of dental practices in compliance with 310 CMR 70.00.

(2) 310 CMR 73.00 is promulgated pursuant to the authority of M.G.L. c. 21, §§ 26 through 53 (the Massachusetts Clean Waters Act), M.G.L. c. 21C, §§ 4 and 6 (the Hazardous Waste Management Act), c. 111, § 150A (the Solid Waste Management Act) and M.G.L. c. 21A, §§ 2 and 8.

73.02: Definitions

Amalgam means an alloy containing mercury and other metals used to restore the dentition.

Amalgam Separator means an item of dental equipment designed to remove amalgam particles from the wastewater passing through the vacuum system, or any vacuum line filters and screens and/or chair-side traps of a dental facility prior to its discharge.

Amalgam Waste means any waste containing mercury amalgam or otherwise associated with preparation or use of amalgam, including but not limited to amalgam collected by chair-side traps, screens, filters, vacuum system filters, amalgam separators or other devices; waste elemental mercury; and waste amalgam capsules.

Approved Amalgam Separator means an amalgam separator that has been demonstrated by the manufacturer to achieve a 98% or greater amalgam removal efficiency. Such removal efficiency shall be determined on the basis of test data generated by a professional laboratory that is qualified to perform the following analytical methods:

- (a) ISO protocol 11143, using average test results under empty and simulated full conditions; or
- (b) an equivalent method that meets Department-approved quality assurance and quality control criteria.

Separators installed under the Department's voluntary Dental Amalgam/Mercury Recycling Certification program, described at 310 CMR 73.03(2)(a) and (b), that have been demonstrated to achieve 95% or greater removal efficiency may be used as long as the separator is properly maintained and continues to achieve a 95% or greater removal efficiency. However, any replacement for such amalgam separators must achieve a 98% or greater amalgam removal efficiency.

Dental Facility means any institution, clinic, office or location where dentistry is practiced, as defined in M.G.L. c. 112, § 50.

Department means the Massachusetts Department of Environmental Protection.

ISO means the International Organization for Standardization.

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Operational Standards means specified business, operational, maintenance and other procedures listed at 310 CMR 73.05 that limit the amount of mercury released to the environment through wastewater and solid waste.

Owner of a Dental Facility means any person who owns, leases, maintains, or operates a dental facility in any office or other room or rooms where dentistry is practiced, as defined in M.G.L. c. 112, § 50, or who directly or indirectly is manager, proprietor, or conductor of the same.

Reclaimed means processing to recover a usable product or regeneration, but does not include burning (*e.g.* for energy recovery) or use constituting disposal.

73.03: Applicability

(1) 310 CMR 73.00 is applicable to all dental facilities except those that do not generate or discharge wastewater from amalgam-related processes (*e.g.*, facilities limited to oral and maxillofacial surgery, or orthodontic, periodontic and/or oral medicine practices) or facilities that use mercury-free filling material and do not place or remove amalgam.

(2) Dental facilities that are subject to 310 CMR 73.00 must comply in accordance with the following schedule:

(a) A dental facility certified by an owner of a dental facility under the Department's voluntary Dental Amalgam/Mercury Recycling Certification program that it installed an approved amalgam separator by February 28, 2005 and maintains compliance with all other requirements of that program is subject to 310 CMR 73.00 effective February 1, 2010.

(b) A dental facility certified by an owner of a dental facility under the Department's voluntary Dental Amalgam/Mercury Recycling Certification program that it installed an approved amalgam separator between March 1, 2005 - January 31, 2006 and maintains compliance with all other requirements of that program is subject to 310 CMR 73.00 effective February 1, 2007.

(c) Dental facilities in operation as of April 24, 2006 and that did not participate in the Department's voluntary Dental Amalgam/Mercury Recycling Certification program shall comply with all requirements of 310 CMR 73.00 no later than June 23, 2006.

(d) A new or expanded dental facility shall install an approved amalgam separator before commencing operation and shall comply with all other requirements of 310 CMR 73.00 in accordance with 310 CMR 70.03(4).

1. a new dental facility is a dental facility commencing operations after April 24, 2006;
2. an expanded dental facility is a dental facility whose maximum amalgam wastewater flow rate exceeds the capacity of the existing certified amalgam separator due to facility expansion.

(3) Compliance with 310 CMR 73.00 does not release the owner of a dental facility from the need to comply with other applicable state, federal and local requirements.

(4) Certification Form. Each compliance certification required pursuant to 310 CMR 70.03 shall be on a form prescribed by the Department and shall address compliance with the standards established by 310 CMR 70.00 and 310 CMR 73.00. The certification form may also address compliance with other applicable standards promulgated by the Department.

73.04: Amalgam Separator Requirements

(1) Each dental facility subject to 310 CMR 73.00 shall:

(a) install an approved amalgam separator(s) which meets the requirements of 310 CMR 73.04;

(b) ensure that all wastewater that contains amalgam waste from the dental facility, including but not limited to wastewater from chairs and cuspidors, passes through an approved amalgam separator before being discharged;

(c) ensure that the installed amalgam separator(s) is properly sized to accommodate maximum amalgam wastewater flow rates at the facility;

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- (d) ensure that any amalgam separator is installed, operated and maintained according to the instructions of the manufacturer of the unit;
- (e) for new or expanded dental facilities that open after April 24, 2006, ensure that the amalgam separator is installed prior to commencing operations; and
- (f) provide to the Department upon request test data generated by the professional laboratory that documents the amalgam separator's removal efficiency.

73.05: Operational Standards

- (1) Each dental facility subject to these regulations shall:
  - (a) ensure that no amalgam waste is disposed of with solid waste or medical waste;
  - (b) safely store all amalgam waste generated at the dental facility in containers that are sealed and structurally sound;
  - (c) use only biodegradable disinfectants and cleaning agents that are non-corrosive (pH range between 6.5 - 9.0) and non-oxidizing (no bleach) in the facility's vacuum lines and all other drains connected to its amalgam separator. The disinfectants and cleaning agents shall also be compatible with the unit(s) in use, and shall be used only in accordance with the unit manufacturer's instructions;
  - (d) transfer all amalgam waste to a permitted hazardous waste recycling facility, licensed hazardous waste facility, a facility that consolidates shipments of amalgam waste before being shipped off-site for reclamation, or, if shipped out of state, a facility that is authorized to reclaim mercury from amalgam waste. Shipments of amalgam waste to facilities described in 310 CMR 73.05(1)(d) shall be transported by either a common carrier or a licensed hazardous waste transporter, and accompanied by information identifying the shipment as amalgam waste containing mercury.
  - (e) retain documentation, such as a certificate of recycling, a hazardous waste manifest, bill of lading or contractual agreement, showing that the amalgam waste has been recycled by being reclaimed and the name and address of the facility at which the amalgam waste is ultimately recycled.

73.06: Recordkeeping

- (1) Dental facilities shall keep records on-site that demonstrate compliance with manufacturers' recommended maintenance and servicing of installed amalgam separators, that the amalgam waste has been recycled pursuant to 310 CMR 73.05(1)(e), and the supporting information upon which the facility relied to file the certification required by 310 CMR 73.07.
- (2) Records referenced in 310 CMR 73.06(1) shall be retained for five years.

73.07: Compliance Certification Requirements for Dental Facilities

- (1) Certification Form. Within 60 days of a dental facility becoming subject to the requirements of 310 CMR 73.00, pursuant to the schedule described at 310 CMR 73.03(2), an owner of a dental facility shall submit to the Department a compliance certification. The certification shall address compliance with standards to which the dental facility is subject on a form prescribed by the Department that shall include at least the following information:
  - (a) The type of amalgam separator installed, including manufacturer and model;
  - (b) Date upon which the amalgam separator became operational, and for new or expanded facilities, the date the facility became operational;
  - (c) Identification of the requirements of 310 CMR 73.04 for amalgam separators and certification as to whether or not the system meets all such requirements;
  - (d) Certification of compliance with the operational standards of 310 CMR 73.05;
  - (e) Certification that documentation and records are being maintained as stipulated in CMR 73.06; and
  - (f) Certification that at least one staff member is familiar with procedures to follow in order to ensure compliance with the amalgam separator requirements and operational standards described at 310 CMR 73.04 and 73.05, and that all other staff that handle amalgam waste are informed of these procedures.

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(2) Each owner of a dental facility subject to 310 CMR 73.07 must recertify five years after the initial certification and every five years thereafter, that the dental practice continues to be in compliance with all requirements listed in 310 CMR 73.04 through 73.07. All such recertifications shall be submitted by June 15<sup>th</sup> of the year in which the recertification is due.

REGULATORY AUTHORITY

310 CMR 73.00: M.G.L. c. 21, §§ 26 through 53, c. 21C, §§ 4 and 6, c. 111, § 150A and c. 21A, §§ 2 and 8.